

**IN THE UNITED STATES DISTRICT COURT FOR
THE NORTHERN DISTRICT OF OKLAHOMA**

State of Oklahoma, et al.,

Plaintiffs,

v.

Tyson Foods, Inc., et al.,

Defendants.

05-CV-0329 GKF-SAJ

**FIFTH DECLARATION OF
DR. VICTOR J. BIERMAN, JR.**

**IN SUPPORT OF DEFENDANTS'
JOINT MOTION TO ENFORCE
SCHEDULING ORDERS IN LIGHT OF
PLAINTIFFS' EXPERT
DISCLOSURE ABUSES**

I, Dr. Victor J. Bierman, Jr. hereby state as follows:

1. I have submitted four Declarations in this matter previously:

- (1) dated June 12, 2008 in support of Defendants' motion to compel working models (Dkt. No. 1721-2);
- (2) dated June 12, 2008 (the identical declaration) filed in support of Defendants' request for more time to complete expert reports (Dkt. No. 1722-10);
- (3) dated July 7, 2008 and made in opposition to the State's motion to strike the motion to compel working models (Dkt. No. 1743-2); and
- (4) dated July 14, 2008 also in support of Defendants' request for more time to complete expert reports (Dkt. No. 1748-2).

2. My training and experience is set out in the June 12 and July 7, 2008 Declarations.

3. I am retained as an expert for the Joint Defense in the above-entitled litigation to analyze and respond to the State's modeling of the Illinois River Watershed. In my capacity as a retained expert, I have reviewed the State's expert reports submitted by Darren Brown, Lowell Caneday, Berton Fisher, Gordon Johnson, Todd King, Robert Lawrence, Roger Olsen, Megan Smith, Robert Taylor, Christopher Teaf, Bernard Engel, Valerie Harwood, Jan Stevenson, Dennis Cooke, Eugene Welch and Scott Wells.

4. I and others have spent the last several months analyzing Dr. Engel's original report and trying to reconcile his outputs from his GLEAMS watershed model, his inputs to his phosphorus routing model, and the results in his expert report. We have been unable to completely reconcile all of these results.

5. We recently received from counsel Dr. Engel's September 4, 2008 "Errata" for his report, which consists of a four-page introduction and 45 pages of new or revised charts, tables, and text. Dr. Engel states that his "report relied upon GLEAMS outputs that used incorrect model code, while the materials considered that were provided by Dr. Engel" to Defendants contained updated, corrected GLEAMS outputs. As a result, our efforts to reconcile the GLEAMS outputs, the routing model inputs, and the results in Dr. Engel's expert report could not have succeeded, and the time we spent trying to do so was largely wasted.

6. Dr. Engel's errata changes his results for P loads during the 1997-2006 base period and for all of his scenarios, both historical and future.

7. Dr. Engel's errata changes virtually all the numbers in his original report, and much of our work in analyzing and preparing to rebut that original report will need to be redone. All of the data and analysis in the Engel report is intertwined and interdependent, and we have no way of knowing how (if at all) Dr. Engel's change in one particular number has affected other numbers in his report until we check every change in the errata against his original expert report. As a result, the re-review made necessary by Dr. Engel's new errata report will require analysis not only of the hard copy materials that Dr. Engel provided, but also of the model codes, inputs, outputs, emails, and everything else that might affect either the model results or Dr. Engel's analysis of those results. File by file, figure by figure, table by table, and word by word in Dr. Engel's expert report, we will have to go through and do it all again.

8. We have also reviewed the August 26, 2008 “errata” submitted by Dr. Wells, which consists of 1 page of text and 116 pages of updated tables and figures. Dr. Wells’ errata changes virtually all the numbers in his original report, and much of our work in analyzing and preparing to rebut that original report will need to be redone. Dr. Wells attributed his errata to the fact that “inadvertent mistakes were made in the boundary conditions for the model.” Dr. Wells went on to state that “[s]ince these changes affected the model inputs for both the calibration and 50 year scenario simulations ... this necessitated rerunning the model calibration and the 50 year simulations.”

9. In addition, Dr. Wells’ errata uses a different set of total phosphorus loads, relabels two of his original scenarios, and adds one new scenario not included in his original report; however, he offers no reason for any of these changes and does not attribute them to any need to correct earlier errors. In order to address all the changed numbers and analyze the new model calibration, the revised 50-year scenarios, and the new and relabeled scenarios in Dr. Wells’ errata, I will have to recheck the hundreds of data and model files on which Dr. Wells now relies and also attempt to reproduce the results in his errata.

10. I am reluctant to proceed with this re-analysis, however, because I am informed that Dr. Wells intends to revise his report yet again. In a September 4, 2008 letter concerning Dr. Engel’s errata (discussed above), Plaintiffs’ attorney David Page states that “Dr. Wells, must rerun his model scenarios with the data used for the Engel Errata because he also used the erroneous data that Engel relied on in his report (Dr. Wells received the P loading data for his model from Dr. Engel).” (parentheses in original.) Mr. Page states that he hopes to produce the additional Wells errata in three weeks, or approximately September 25, 2008. I anticipate that this third version of Dr. Wells’ report may, like the second, change all the numbers in all of the files, and

may likewise change his model calibration and his 50-year scenarios. Until we have the truly final version of Dr. Wells' report and its supporting materials, there is little point in continuing the analysis of his August 26 errata.

11. I have also reviewed the "Section 5" portion of the August 5, 2008 errata to Dr. R. Jan Stevenson's report "Nutrient Pollution of Streams in the Illinois River Watershed: Effects on Water Quality, Aesthetics, and Biodiversity." Dr. Stevenson does not claim that he made any errors in Section 5 of his original report, but his revised Section 5 introduces a completely new method and substantially changes important parts of Section 5 of the original report.

12. Specifically, Dr. Stevenson abandons the linear-regression method he used in his original report to determine current conditions and percent changes in total phosphorus (TP) concentrations over the next 50 years, and adopts instead a method using long-term averages of TP concentrations. Dr. Stevenson states that "**the linear regression method ... was not as accurate as the revised methods that are detailed in the Section 5 errata**" (bold in original), but does not explain why.

13. Using this new method, Dr. Stevenson substantially changes the conclusions of his report. Most prominently, Dr. Stevenson's errata reverses the comparative results of his "no litter" and "no litter plus buffer" scenarios, and increases the predicted TP concentrations for the "continued growth" scenario by approximately five-fold.

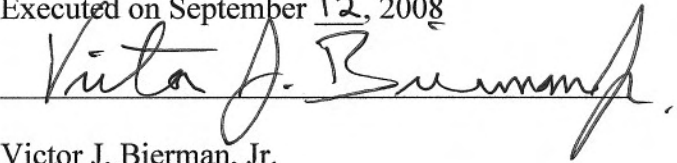
14. Because Dr. Stevenson has changed both his conclusions and the methods by which he obtained them, Dr. Stevenson's new report will require us to start completely over and to analyze his methods, his analysis, and his conclusions from square one. And again, because Dr. Stevenson's errata relied on Dr. Engel's erroneous phosphorus loads, Plaintiffs' attorneys have stated that they may produce yet another version of Dr. Stevenson's report. For this reason, I am

again reluctant to proceed with a more detailed analysis of the August 5 errata to Section 5 of Dr. Stevenson's expert report until I know that I have the final version of that report.

15. In sum, I and my team have spent a great deal of effort, time, and money in attempting to analyze what are now conceded to be erroneous, outdated, or incomplete reports of Drs. Engel, Wells, and Stevenson. In order to properly analyze the new errata, both those already received and those promised in the future, we will need to go all the way back to the model codes, model input files, model output files, supporting data, methods, and conclusions in all of the original materials and compare them to the corresponding materials in the new errata.

I declare under penalty of perjury under the laws of the United States of America that the foregoing is true and correct.

Executed on September 12, 2008

A handwritten signature in black ink, appearing to read "Victor J. Bierman, Jr.", written over a horizontal line.

Victor J. Bierman, Jr.